

Region-Based Memory Management for Object-Oriented Programs

Abstract

5 An object-oriented program is modified to create objects within specified regions,
allowing memory de-allocation to take place for entire regions at once. The contents and
associations between the regions are described by one or more shape graphs, which are
created from an analysis of the program code. The region association metadata stored by
the shape graphs allows the region-based memory management to take place while
10 requiring no more than one region to be passed to methods for each object passed.